

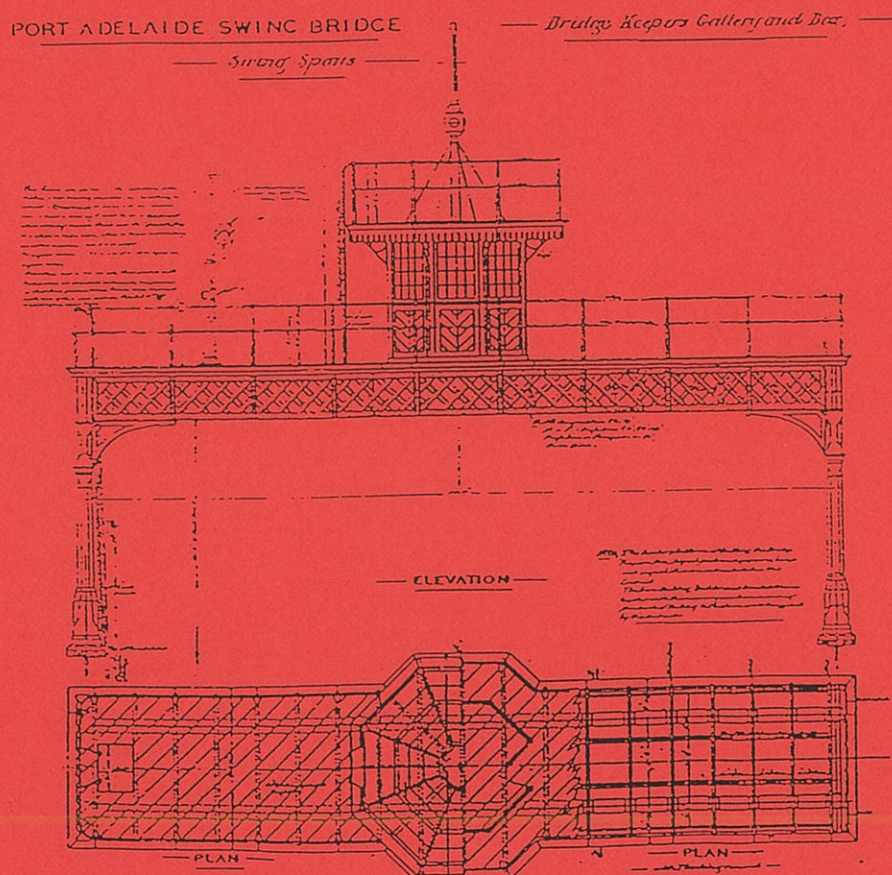
JERVOIS BRIDGE

PORT ADELAIDE

NOMINATION & CEREMONY REPORT

for the

HISTORIC ENGINEERING MARKER



Prepared by
Engineering Heritage Branch
S.A. Division, IEAust.

Issue: 01
Date: 4 May 1995

SAD 94/07

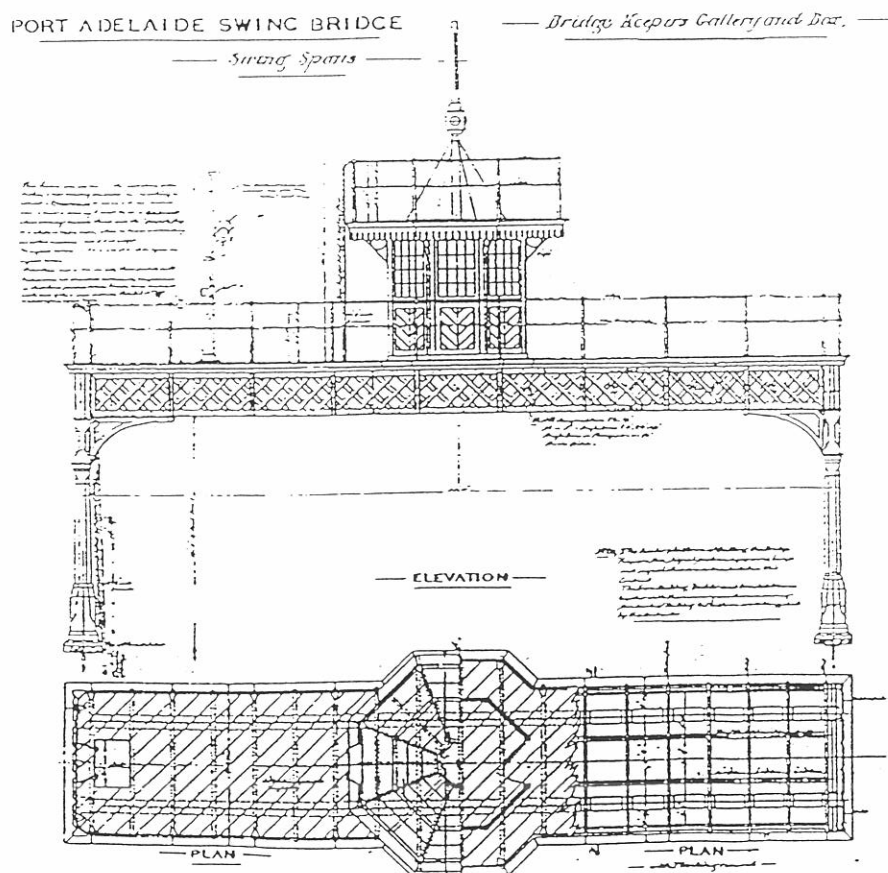
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Nomination and Ceremony Report

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1. INTRODUCTION

The Jervois Bridge was nominated for an Historic Engineering Marker in July 1994 by the Engineering Heritage Branch of the S.A. Division. The necessary research was undertaken by committee members H.G. Orr and C.R. Stewien

The plaque was dedicated at a ceremony on 16 October 1994 being an important part of the IEAust. field day "Wings, Water and The Port".

Located adjacent the columns of the Bridge Keeper's Gallery, which is now retained by the City of Port Adelaide as an item of our engineering heritage, the Historic Engineering Marker enjoys a prominent position in a carpark adjacent to former wharf sheds now used for retail markets.

Mounting of the Historic Engineering Marker was enthusiastically undertaken by the City of Port Adelaide.

The Historic Engineering Marker was jointly unveiled by Division President, Glen Parkinson and Port Adelaide Mayor Bob Allen.

A supporting address was given by Rod Payze, Commissioner of Highways whose office had been responsible for the care and maintenance of the bridge throughout its working life.

Attendance at the ceremony was estimated at 70 to 80 persons.

THE INSTITUTION OF ENGINEERS, SOUTH AUSTRALIAN DIVISION

HERITAGE BRANCH

NOMINATION FOR HISTORIC ENGINEERING MARKER – JULY, 1994

BRIDGE KEEPER'S GALLERY AND BOX FROM OLD JERVOIS BRIDGE, PORT ADELAIDE.

1. INTRODUCTION

This submission is for approval for an Historic Engineering Marker to be established at the Bridge Keeper's Gallery and Box of the old Jervois Bridge (now demolished) at Port Adelaide. The Gallery and Box structure was retained by the then City Engineer of Port Adelaide (Mr. W.B. Hagan) when the bridge was demolished in 1969 and later set up within the Port Adelaide Historical Precinct. It is currently owned by the City of Port Adelaide.

Appendix A contains a brief history of the various bridges at the site and a more detailed description of the Old Jervois Bridge. (Author unknown). Attached are copies of some of the original bridge drawings which are held by the South Australian Department of Road Transport.

2. STATEMENT OF SIGNIFICANCE

Port Adelaide is located on the Port River and as such it has always been dependent on bridges to give access to the LeFevre Peninsula to the north and west. Map 1 shows the present location of the Bridge Keeper's Gallery and Box (Item 13) and Map 2 the location of old bridge prior to demolition. The "old" Jervois Bridge – from which the Bridge Keeper's Gallery and Box was taken – was a swing bridge, built of iron and was opened in 1878 by Governor Jervois. The bridge had a length of 220 m. between abutments with a swing span of 50m. This bridge was the only one of this type built in South Australia and was an early example within Australia as a whole. For comparison the Napier Street swing bridge across the Maribyrnong River at Footscray was built in 1893, and Australia's oldest swing bridge across the Latrobe River 5km south of Sale was built between 1880 and 1883 [Ref. (1)]

The swing span of the Old Jervois Bridge consisted of rivetted wrought iron plate girders and cross girders (fabricated by Westwood and Baillie & Co., in England.) with a radius of 19 feet to the trunion wheels.

Ref (1) Spanning Two Centuries, Colin O'Connor 1985

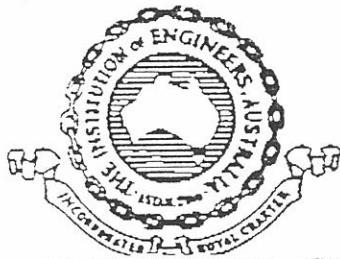
The central pier, carrying the hydraulically operated swing span, was supported on nine cast iron piers. Trunion wheels carried the main swing structure and the mechanism was designed and built by Sir William Armstrong at their Newcastle Upon Tyne Works.

The Bridge Keeper's Gallery and Box structure is therefore the only remnant of a bridge that was very significant to South Australia and perhaps significant nationally. It is an excellent example of decorative cast iron columns with crossed lattice wrought iron support trusses and of the use of these materials in industrial structures at that time.

The S.A. Division Heritage Branch has a short video showing the swing bridge operating. This was probably filmed just prior to demolition.

Assessment of Heritage Significance of Old Jervois Bridge Keeper's Gallery and Box

- Technological Value – mainly as a remnant of a bridge that was very technologically significant in South Australia. It illustrates how industrial design has changed over a period of 100 years.
- Historic Value – the importance of bridges to Port Adelaide and the construction of old Jervois Bridge give the structure great historical value.
- Social Value – the ornate detail and care in design illustrate the importance attached to major structures at that time.
- Townscape Value – has significant townscape value and is a valuable component of the Port Adelaide Historic Precinct. It also illustrates a style of industrial design common at the time.
- Association Value – Illustrates the early dependence of South Australia on British engineering for certain components for larger structures.
- Rarity – unique in South Australia and possibly in Australia.
- Representative – the Tower is an excellent example of cast iron/wrought iron industrial construction.
- Condition – Excellent
- Integrity – complete as far as is known.
- Authenticity – Totally authentic as far as we are aware.



HISTORIC ENGINEERING MARKER

REMNANT OF JERVOIS BRIDGE

THIS BRIDGE KEEPER'S GALLERY AND BOX WAS A PART OF THE ONLY SWING BRIDGE IN SOUTH AUSTRALIA. OPENED IN 1878 AND DEMOLISHED IN 1969, THE BRIDGE LINKED ST VINCENT STREET, PORT ADELAIDE ACROSS THE PORT RIVER TO HART STREET. ITS CENTRAL SPAN OF 50M ROTATED FOR THE PASSAGE OF SHIPS. THE WROUGHT IRON STRUCTURE WAS SUPPLIED BY WESTWOOD BAILLIE OF ENGLAND. ITS CONSTRUCTION WAS SUPERVISED BY ENGINEER H C MAIS. ROAD, RAIL, TRAM AND PEDESTRIAN TRAFFIC USED THE BRIDGE WHICH PROVIDED IMPROVED ACCESS TO SEMAPHORE.

DEDICATED BY
THE INSTITUTION OF ENGINEERS, AUSTRALIA, 1994

APPENDIX A

THE JERVOIS BRIDGE

1831 - 1875

Port Adelaide serves the Capital of South Australia and is the principal seaport in the state. It was identified as a suitable site for a port by Captain Sturt and this was confirmed later by Colonel Light when he was laying out the future metropolis of Adelaide.

The Port River passes through the settlement but the original (and today, the most important) part of the port lays to the south and east of the river. Once described as a shallow salt stream, dead and unproductive, the river is tidal and provides a safe harbour for overseas shipping. The original landing place was established upstream from the present port at a point known as Port Misery, but this was unsatisfactory because of the shallow draft and soon an alternative site was sought.

In October 1840, the Governor, Colonel Gawler, opened a wharf and access road at the "new port" and named it after the Manager of the South Australian Company - the McLaren Wharf. The suburb known as Port Adelaide today was in those days a salty swamp subject to inundation at high tide and initially houses were built on stilts to keep them above the sea. Gradually as the river was dredged to make it suitable for deeper draft vessels, the silt dredged from the bottom of the river was used to build up the low-lying lands to overcome the problem of flooding.

For many years the only means of communicating with the north or west side of the river (known as Le Fevre Peninsula) was by boat. Due to the efforts of Captain Hart, an early resident, the original "Port Bridge" was opened in 1858 and connected the western end of St. Vincent Street to Le Fevre Peninsula. A supply of water from a well at Birkenhead on the Peninsula and the availability of land made it an attractive place to live. A settlement on the sea side of Le Fevre Peninsula had been established at the Semaphore and in 1860 the Semaphore Jetty was built. Shipping from England started calling at Semaphore to discharge the mails and this increased the peninsula's importance. Travel for the growing traffic between Port Adelaide and Le Fevre Peninsula was either by boat or by a long detour to the south.

The site for the bridge was chosen at the end of St. Vincent Street as this was well upstream and in a position which least interfered with shipping. The single lane bridge with footpath was constructed of timber and was sited near where the present bridge is located. The piles came from the Swan River and the bridge had a 10 metre drawspan for shipping. In 1861 part of the eastern embankment was washed away and in 1864 the bridge was closed for a period while the carriageway was repaired. By 1874 the bridge had deteriorated and a replacement was proposed.

A TEMPORARY BRIDGE

In 1875, a temporary bridge was built 25 metres upstream from the old Port Bridge, and was of similar construction. The old bridge was then demolished and the channel deepened and at the same time..

work began on the new bridge. The temporary bridge was demolished in February 1878.

THE RAILWAY

A line of railway was opened between Adelaide and Port Adelaide on 19 April 1856. This line terminated at the Port Dock Railway Station where both passenger and goods facilities had been established.

In June 1874, Parliament was told that, as it was necessary to replace the existing wooden bridge over the Port River with a better structure, this provided an opportunity to extend the railway from Port Adelaide to Semaphore. The Government's aim in constructing the line was to furnish increased travel opportunities for the people of Adelaide and northern suburbs to visit Semaphore. The railway would provide rapid communication with Adelaide and would be well suited for the patronage of seaside visitors and the mercantile interests. The cost of the line was estimated at 25,000 pounds (\$50,000), and the Railways Department was given authority to construct the railway along public roads.

From Port Dock Station, the railway was to run down St. Vincent Street and over the new bridge thence into Hart Street and on to Semaphore. Signals would be provided to indicate when it was safe for trains to cross, while an elaborate system of safe-working was to be introduced by the Railways Department to ensure that trains did not run on the line while the bridge was open for shipping. Trains were to cross the bridge at 5 m.p.h.

THE NEW BRIDGE

The swing bridge, built of iron, was a feature of the Port River for just over ninety years. Opened on 6 February 1878 by Governor Jervois and costing 65,000 pounds (\$130,000), Jervois Bridge had a length of 100 metres between abutments with a central swing span of 50 metres. The swing span consisted of wrought iron plate girders and cross girders fabricated by Westwood, Baillie & Co. in England, and originally carried a deck of iron buckle plates which supported the railway as well as the roadway until the rail line was closed in 1922.

The central pier, carrying the hydraulically operated swing span consisted of nine cast iron piles. Trunnion wheels carried the main swing span girder system which turned through 90 degrees to provide a clear navigation opening of 16 metres. The mechanism was designed and built by Sir William Armstrong at their Newcastle-upon-Tyne works at a cost of 6,000 pounds (\$12,000). A steam engine was used at first to drive the pump for the swing gear, but when the boiler became unsafe it was superseded by an electric motor. The opening of the bridge was controlled from a cabin on a tower carried over the roadway above the centre pier. This position gave the operator a clear view of both the river and the road approaches. This tower, now located next to the Birkenhead Bridge, is believed to be the only remaining part of Jervois Bridge.

For some years the bridge carried water and gas mains which had

to be disconnected each time the bridge opened. The Semaphore water tower and a gas holder were built to maintain services. The mains were later transferred to the railway bridge built in 1911. above the limit of navigation. In its last years the swing mechanism jammed in the summer months and was opened for the last time on 26 August 1966. Many of the timber piles of the approach spans were eaten away below the water line, so a two tonne load limit and 25 kph speed limit were imposed. Trolley buses were deviated across Birkenhead Bridge.

THE RAILWAY AGAIN

Railway works on either side of the bridge were completed by September 1877. To test the bridge a test train was run on 31 December 1877 consisting of a locomotive, 4 trucks and 12 carriages. On board were senior Government officers. On 3 January 1878 the first passenger service began and on that day approximately 500 people travelled by rail to Semaphore. The bridge was not officially opened until 34 days later.

Care and maintenance of the bridge became the responsibility of the Railways Department, and they issued the following instructions for the operation of the bridge:

"INSTRUCTIONS FOR OPENING

- (a) When it is necessary to open the Jervois Bridge, notice must be given to the Railway Station Master, Port Adelaide, by the agent or master of the vessel on the form provided for the purpose by the Department.*
- (b) If the application is approved by the Station Master, he must at once advise, on the form provided for the purpose, the following:*
 - * The Harbor Master, Port Adelaide*
 - * The Superintendent of Tramways, Port Adelaide*
 - * The Superintendent of Waterworks, Port Adelaide*
 - * The Driver, Jervois Bridge*
 - * The Station Master, Glanville*
 - * The Staff, Port Adelaide Dock Station*
- (c) In addition to the written advice prescribed in clause (b), the Station Master, Port Adelaide, must at once advise the officers marked "*" by telephone, stating the time at which the bridge is to be opened. The messages must be in writing, and after transmission, must be at once repeated back and recorded. Particular care must be taken to obtain and record the names of the transmitting and receiving operators, respectively, and to record the time of despatch, and time of receipt by the respective operators.*
- (d) The Station Master, Port Adelaide, must advise in writing the Porter in Charge of the St. Vincent Street Signal Box of the opening of the bridge, and the Station Master, Glanville, the Signaller at Glanville.*
- (e) The Station Master, Port Adelaide, must send a Pilotman, wearing Pilotman's badge, to Jervois Bridge with instructions -*

to remain on the Port Adelaide side of the bridge until the bridge is closed, and then immediately proceed to Glanville and advise the Station Master there who will in turn advise the Station Master, Port Adelaide, by recorded telephone message. The arrival of the Pilotman at Glanville will be proof that the bridge has been properly closed again. The line must be blocked from the time the Pilotman leaves Port Adelaide Dock Station until he arrives at Glanville.

- (f) When this bridge is opened before daylight a red light must be placed on the road at each end of the opening before the chain is passed across, the light to be kept facing in the direction of the traffic so long as the bridge is open.
- (g) The Driver at Jervois Bridge is responsible for putting the bridge signals at "danger" before the bridge is opened, and for putting them at "caution" after the bridge is closed.
- (h) The Station Master, Glanville, is responsible for cleaning and lighting the two departmental street lamps at each end of the bridge (four in all), and the lamps of the bridge signals.
- (i) The up home signal is a one-armed signal on Driver's left hand, by the bridge, and the down home signal is a one-armed signal on Driver's right hand by the bridge. These must be observed as 'home' signals."

Warning gongs were installed at each end of the bridge in 1906. They were operated by the signalman in the St. Vincent Street signal cabin by pressing a button when a train was on the line between Port Adelaide and Glanville and were stopped automatically by the passage of the train. These gongs were removed in 1923.

The railway line over the bridge was closed on 15 December 1922, and as a consequence in 1926 the Jervois Bridge was handed over to the Highways and Local Government Department - as the road construction authority - for maintenance.

TRAMWAYS

On 2 September 1912, Mr. W. T. Goodman (later, Sir William) who was Chief Engineer and Chairman of the Municipal Tramways Trust brought down a report recommending the electrification of the Albert Park Tramway Line and the linking up of Largs, Semaphore, Port Adelaide and Rosewater and eventually Birkenhead, at a total cost of 70,000 pounds.

On 2 November 1912, the Mayor, J. H. Clouston, turned the first sod to mark the construction of the permanent way. Initially only a single line was laid along St. Vincent Street parallel with the railway line. By 3 April 1917, the contractors, Messrs. Burt & Timms had completed the work of constructing the tram line along the western side of Jervois Bridge. The first tram was driven over the bridge by Mrs. Sweeney, the wife of the Mayor.

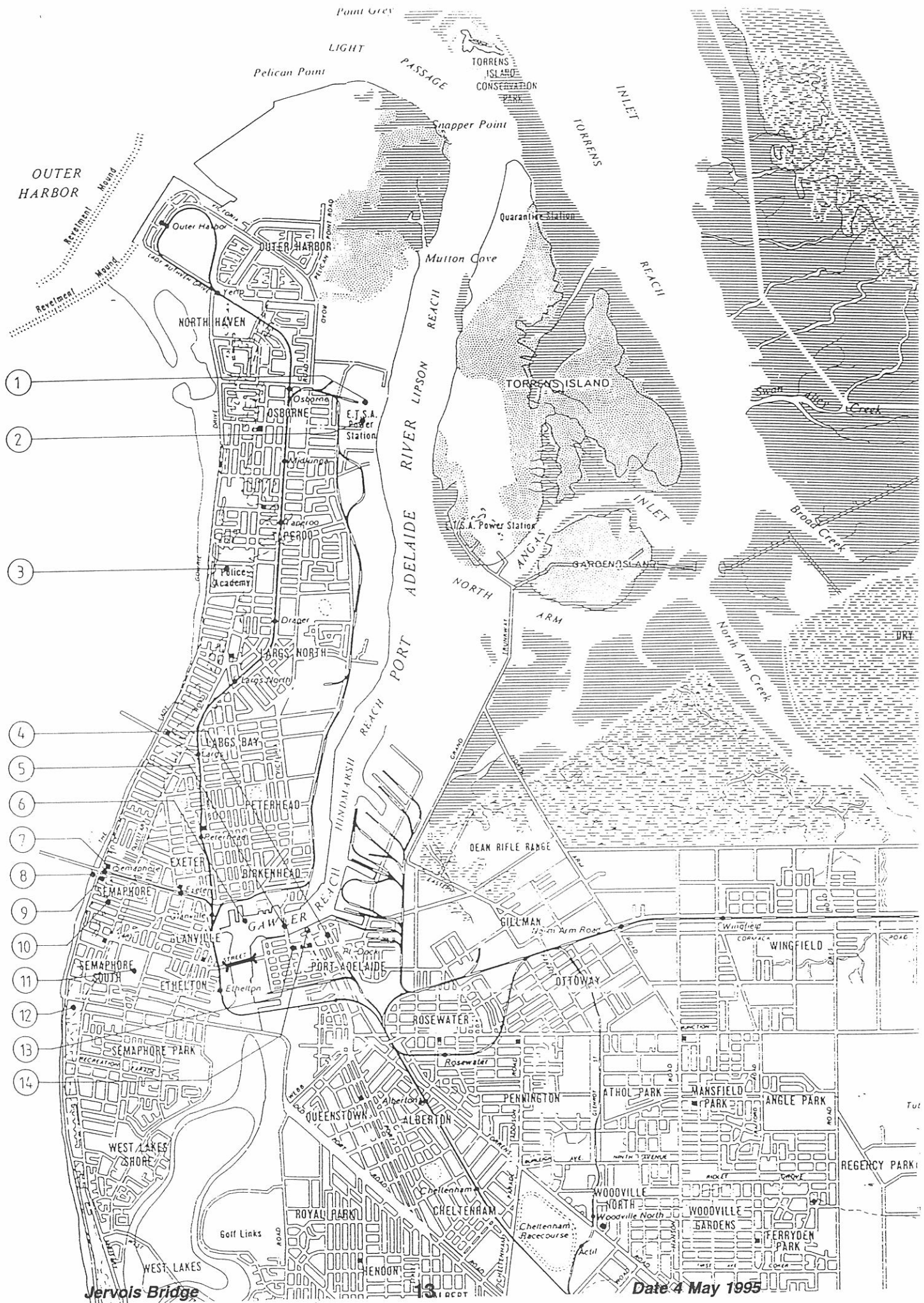
Although the line was opened as a single line, shortly after, the railway line was moved to a new position 13 feet (4 metres) to

the north enabling a second line of rails to be laid to duplicate the tram line. Tram tracks on the western side of the bridge were illuminated by twenty-six 600 c.p. gas lamps.

Trams continued to run over the bridge until they were replaced with trolley buses. The last tram ran on 27 July 1935.

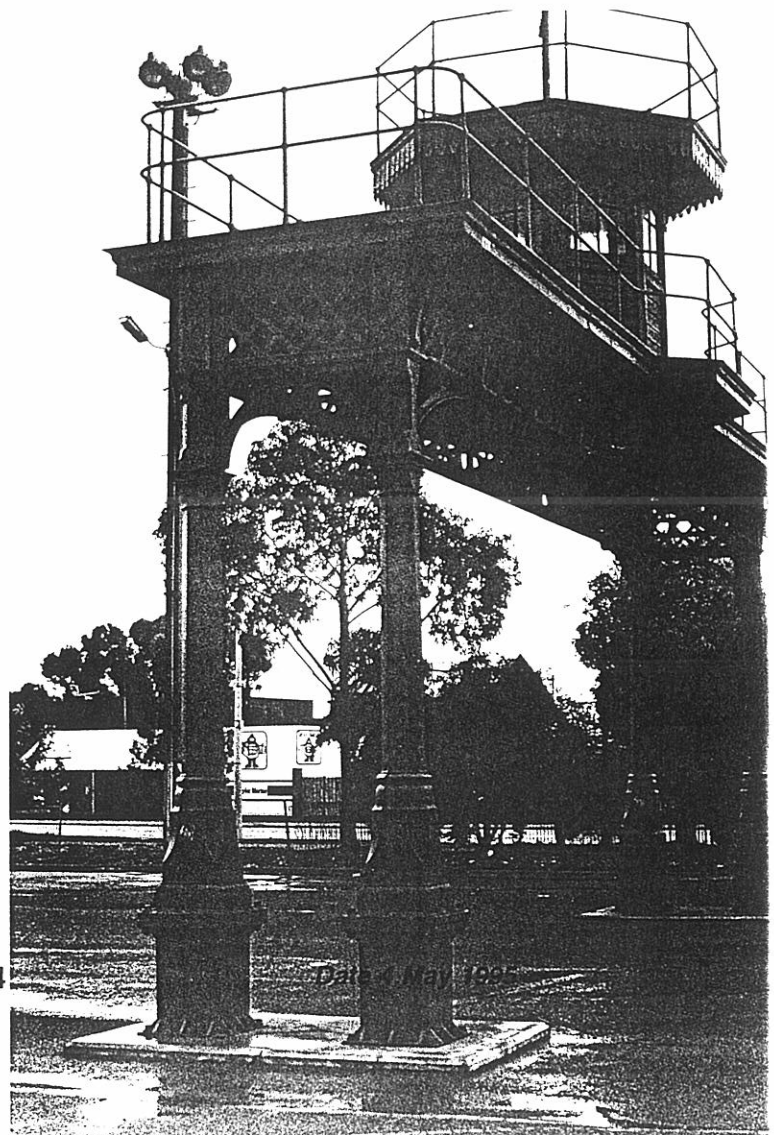
NEW JERVOIS BRIDGE

In 1966 the Parliamentary Standing Committee on Public Works approved the construction of a medium level fixed bridge to replace the old Jervois Bridge. The new Jervois Bridge as built carried four lanes of traffic over Semaphore Road, the Outer Harbor railway and the Port River on a new alignment just upstream of its predecessor. It comprises sixteen spans of prestressed concrete girders with an overall length of 340 metres and was opened on 28 July 1969. The old Jervois Bridge was then demolished.

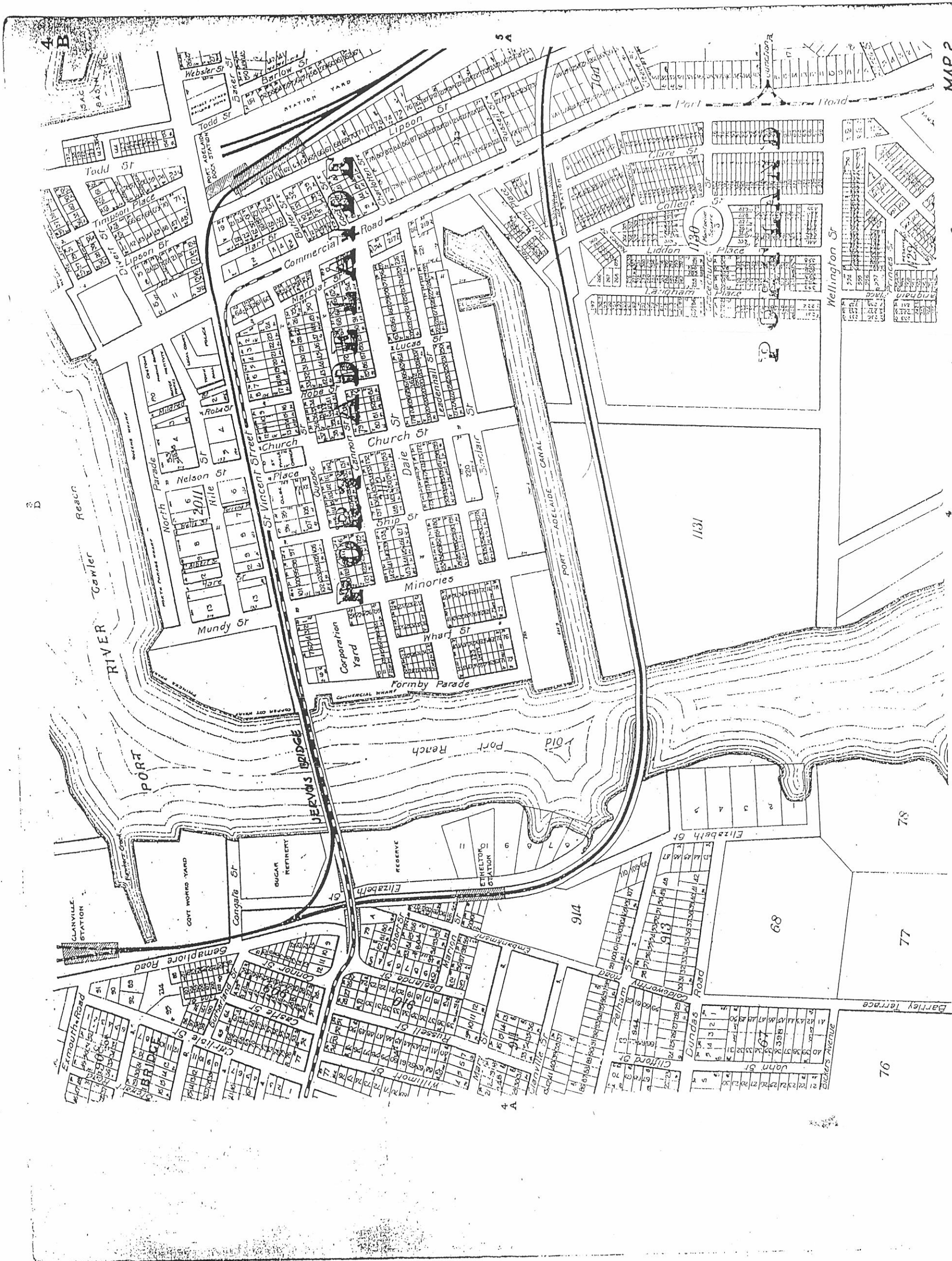




Bridge Keeper's Gallery and Box
From Old Jervois Bridge –
Port Adelaide
South Australia



Jervois Bridge



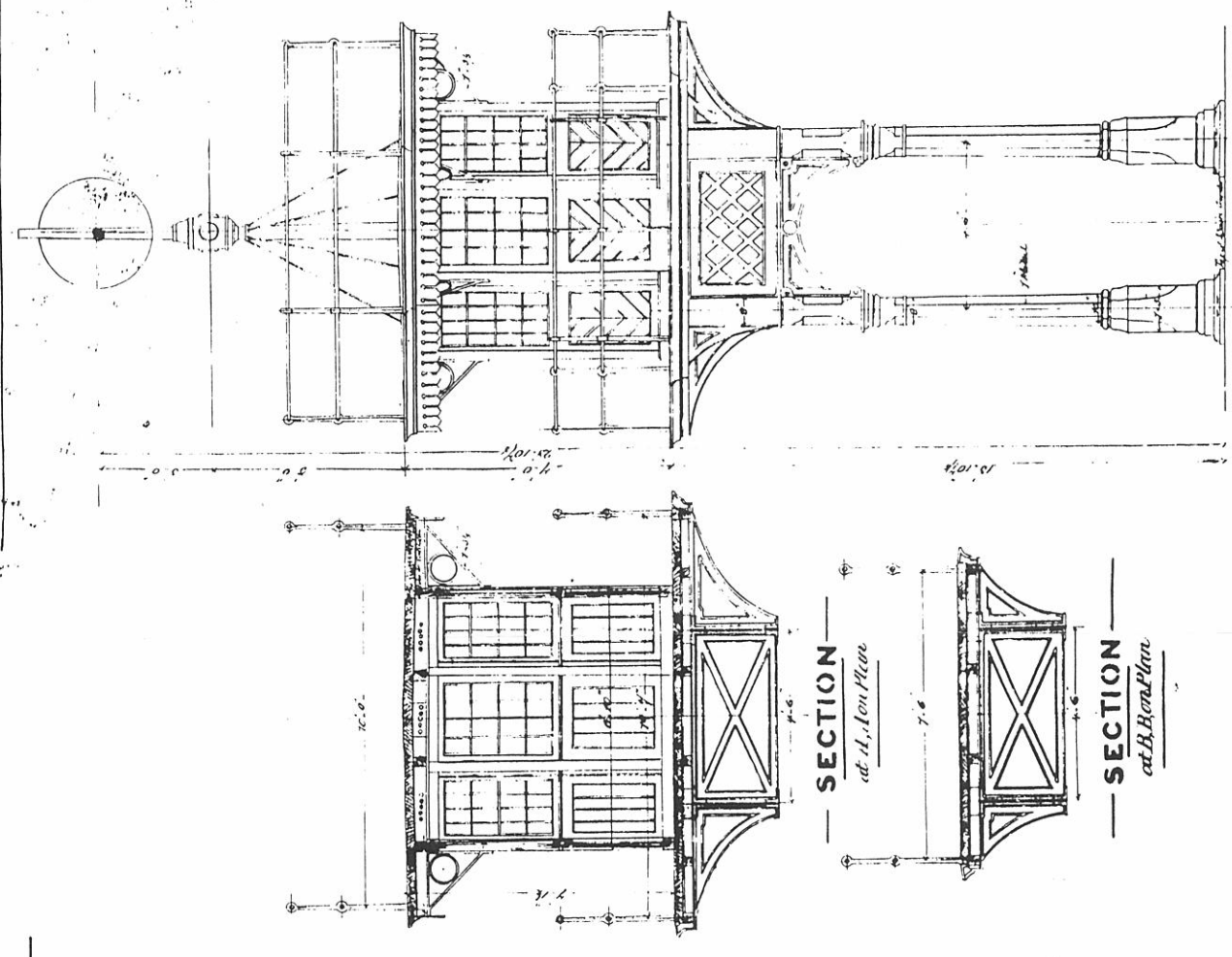
MAP 2

W. G. FULLER
ARCHITECT & SURVEYOR
CIRCA 1925

PORT ADELAIDE SWING BRIDGE

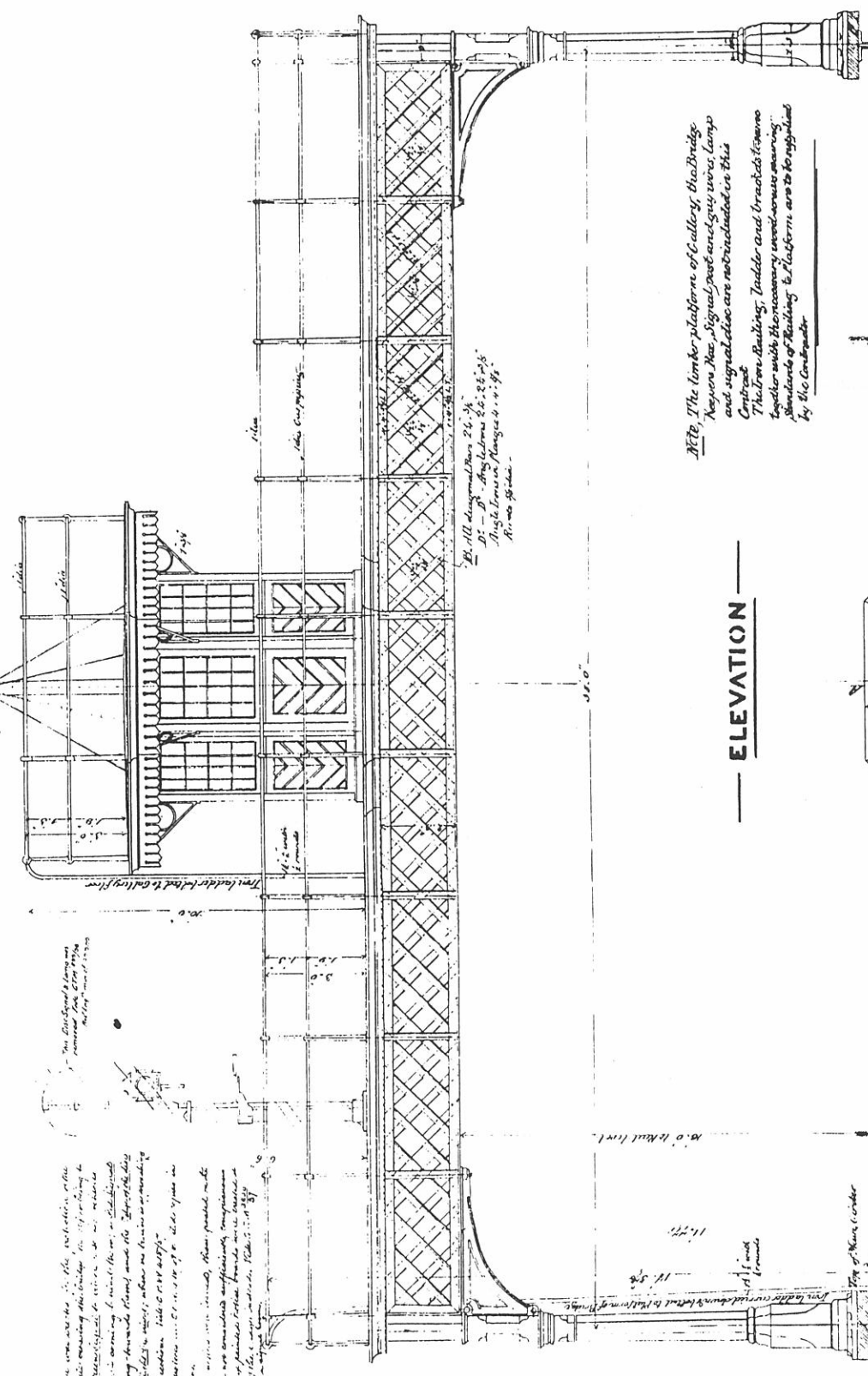
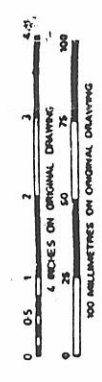
— *Swing Spans* —

— *Bridge Keepers Gallery and Box* —



ELEVATION
at End

SCALE OF FEET



ELEVATION

PLAN

PLAN

— with Planking removed —

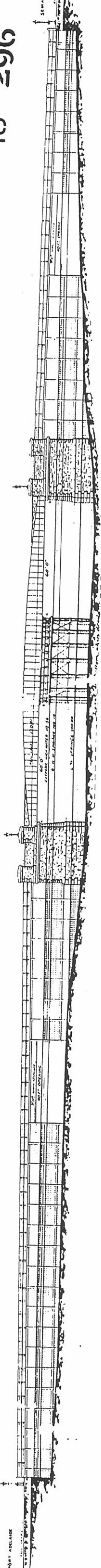
Note: The timber platform of the Bridge
Keypers Box, Signal post and gas wire, lamp
and signal disc are not included in this
Contract.
The iron railing, ladder and brackets frame
together with the necessary woodwork forming
platform of railing to platform are to be supplied
by the Contractor.

This drawing was made for the purpose of the
bridge, which is to be built on the site of the
old bridge. The bridge is to be built on the
site of the old bridge. The bridge is to be
built on the site of the old bridge. The bridge
is to be built on the site of the old bridge.
The bridge is to be built on the site of the
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Office Copy

203 3514
+8 296

PORT ADLAIDE



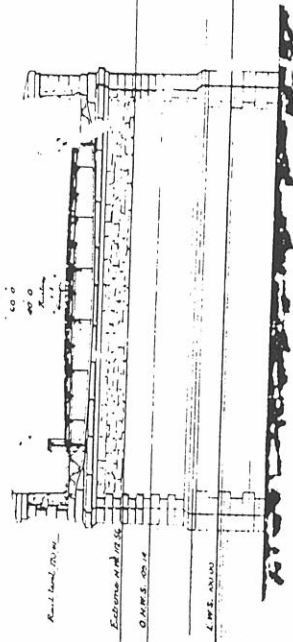
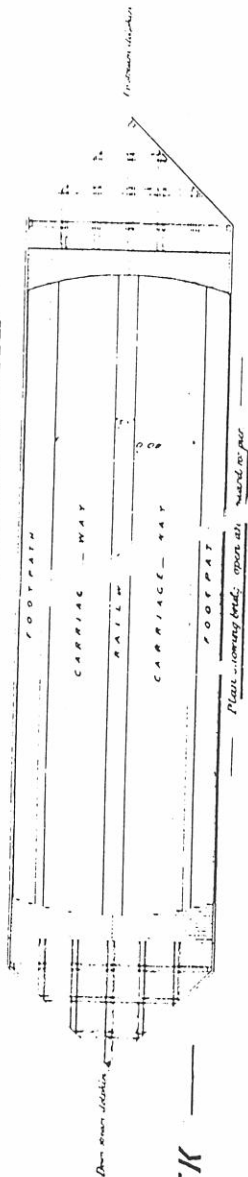
GEN'L ELEVATION

OF

SWING BRIDGE OVER PORT ADELAIDE CREEK

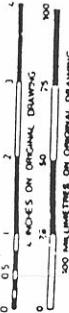
SCALE

2 FT. TO AN INCH



CROSS SEC.

PORT ADLAIDE



0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

INCHES ON ORIGINAL DRAWING

100 MILLIMETRES ON ORIGINAL DRAWING

SHEET 20

203 3514



3. RUNNING SHEET FOR CEREMONY

RUNNING SHEET FOR

JERVOIS BRIDGE

PLAQUING CEREMONY

16 OCTOBER 1994

Preliminaries

- 1 Plaque provided by IEAust by 7 October
- 2 Plaque mounted by City of Port Adelaide
- 3 Public Address System (Portable) PACC?
- 4 IEAust Flag for unveiling (DD Strain)
- 5 Ceremony Brochure (copy attached)
- 6 Invitation letter and list (attached)
- 7 Media release IEAust to prepare for release 10/10/94
- 8 Photographic record (John Pickles)

Ceremony

11.30	Place flag over plaque Assemble 12 chairs and set up PA	DDS council
11.55 – 12.00	CROWD ASSEMBLY	DDS
12.00 – 12.05	WELCOME AEPP Outline importance of bridge Introduce Mr R Payze	
12.05 – 12.10	Dept of Transport involvement with the bridge and pleased to see the Bridge being recognised.	RP
12.10 – 12.15	History of the Bridge and its significance (DCK will prepare draft)	GP
12.15 – 12.20	Response by mayor	RA
12.20 – 12.22	Conclusion and instructions to field day participants	DCK

4. INVITATION ACCEPTANCES

Attending Plaquing Ceremony – 16th October, 1994

Mr. Raggatt, Councillor

Mr. Bob Allen, Mayor

Mr. Ron Ritter, Adelaide Historical Society

Mr. Ron Clark, Adelaide Historical Society

Mr. and Mrs. John Isherwood

Mr. David Pickford

Apologies for Plaquing Ceremony – 16th October, 1994

Peter Shipp, Manager, Port Operations, Marine and Harbours

Mike Davey, Managing Director, Adelaide Brighton Cement Limited

Stuart Mockridge – State Heritage Authority

Peter Edmonds – C.E.O. S.A. Ports Corporation

G. Knoblauch

D. Cameron

THE INSTITUTION OF ENGINEERS, AUSTRALIA
HISTORIC ENGINEERING MARKER
CEREMONY

AT
12 NOON

SUNDAY 16 OCTOBER, 1994

PROGRAMME

WELCOME ADDRESS

Mr. D.C. Kemp, FIEAust, CPEng.,

SUPPORTING ADDRESS

Mr. Rod Payze, FIEAust, CPEng.,
Commissioner of Highways

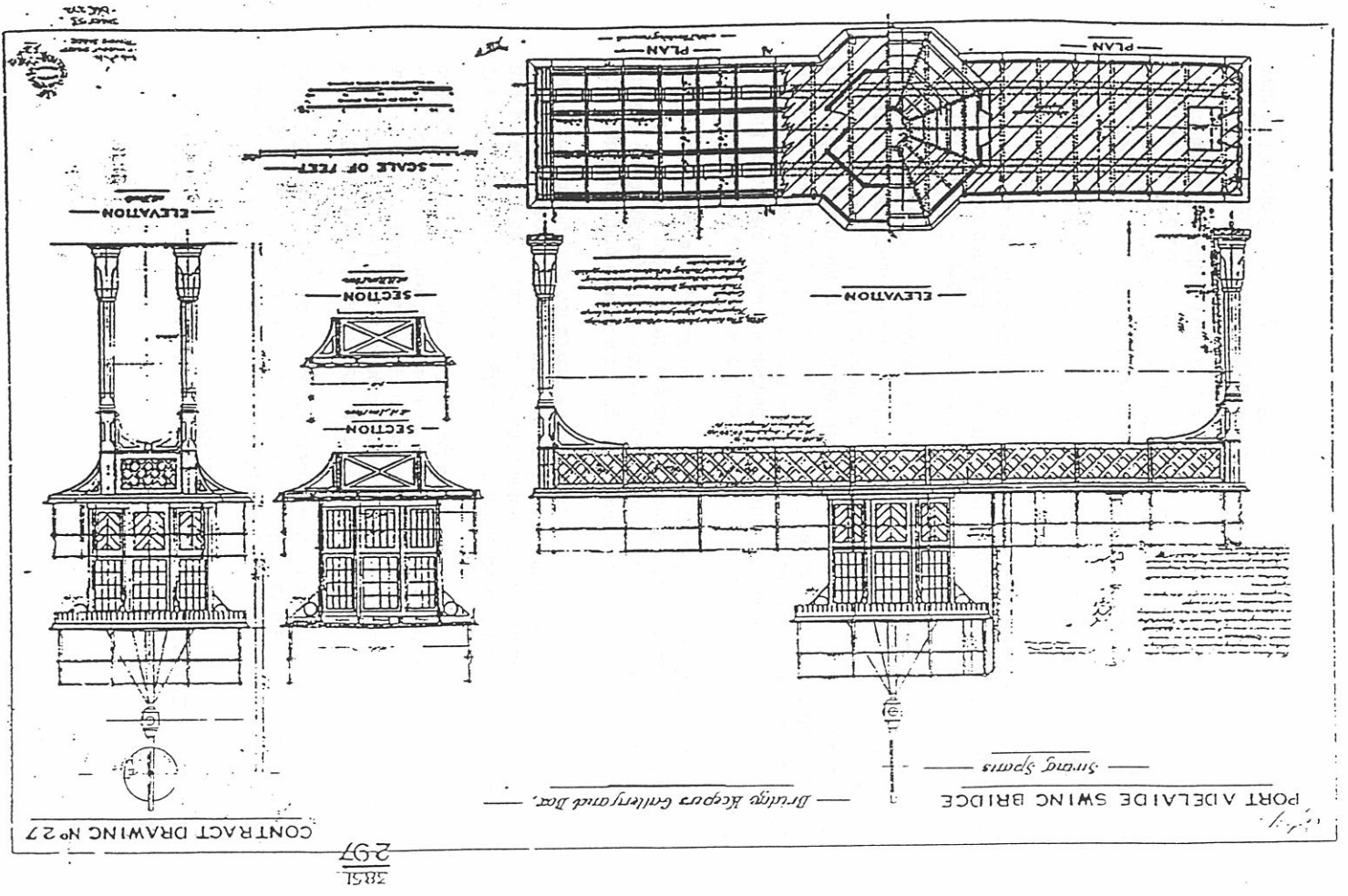
UNVEILING OF HISTORICAL ENGINEERING MARKER

Mr. Glen Parkinson, FIEAust, CPEng.,
President, S.A. Division, Institution of Engineers,
Australia

His Worship, The Mayor of the City of Port Adelaide
Mr. Bob Allen

CONCLUDING REMARKS

Mr. Deane Kemp



BRIDGE KEEPER'S GALLERY AND BOX FROM THE JERVOIS BRIDGE
1878-1969

The Old Jervois Bridge was opened in 1878 by Governor Jervois and demolished in 1969. It was located close to the present bridge at the western end of St. Vincent Street and was the third bridge erected at this position.

The old Bridge had a length of 220m between abutments and had a swing span of 50m, approximately half way along its length. This swing span could be rotated to allow the passage of ships through to the old Port Reach south of the Bridge. This was necessary because the clearance from water level to the underside of the bridge structure was only some fifteen feet at low water.

The old Bridge played a very significant part in the development of Port Adelaide as it provided direct access to a road and rail transport to Semaphore which was a major sea side resort and the point where overseas mails were discharged. Note that Outer Harbour was not developed until 1908.

The central swinging span of the bridge was controlled from the operator located in the box on the gallery which was salvaged from demolition and relocated to where they are standing today. From this box the operator had a clear view of the river and the road and rail approaches and would open and close the bridge safely.

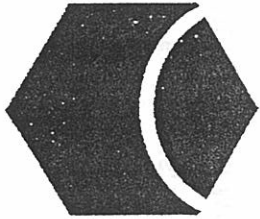
The central swing span pier was supported on nine cast iron piles and concreted of wrought iron plate girders fabricated by Westwood Baillie and Co. in England. Trunnion wheels carried the main swing girder system which rotated through 90 degrees to provide a clear navigation opening. The mechanism was designed and built by Sir William Armstrong at their Newcastle Upon Tyne works and cost 6,000 pounds (\$12,000). It was originally driven by a steam engine but this was later replaced by an electric motor. The construction was supervised by H.C. Mais, MICE, IMechE., MASCE, Engineer-in-Chief for South Australia.

The Old Jervois Bridge was one of the earliest of its type in Australia and the Gallery and Box demonstrate the ornate detail in design typical of the era. The Bridge made a significant contribution to the development of Port Adelaide and South Australia.

AUSTRALIAN ENGINEERING PLAQUING PROGRAMME

This programme has been operated by the IEAust. since 1984 as a means of attracting public attention to historic engineering objects and sites and increasing awareness of the significant contribution made by engineers to the development of Australia and the welfare of its people.

The Jervois Bridge is the fifth engineering work in South Australia to be honoured with an Historic Engineering Marker Plaque.



THE
INSTITUTION OF ENGINEERS,
AUSTRALIA

JERVOIS BRIDGE 1878-1969

CEREMONY FOR THE UNVEILING

OF

HISTORIC ENGINEERING MARKER

at

PORT ADELAIDE

on

16 OCTOBER, 1994.

.....

6. ADDRESS BY MR. R. PAYZE, COMMISSIONER OF HIGHWAYS

The success of engineering is judged by the demonstrated benefits offered to human kind.

Events like today, which make provision for recognizing engineering achievements of the past, are also events which gives us an opportunity to trace the history of urban development.

In doing so one can only reflect on the foresight of passed engineering designs and marvel at the flexibility of purpose of the structures created.

- . The first bridge on the site of the Jervois Bridge was built in 1858 at a cost of \$9,600. I would say this was pioneering.
- . It was a timber bridge incorporating a draw bridge and the site was selected because it offered a crossing with a minimum of interference to shipping.
- . Previous to that boats provided the only means of crossing for the settlers on the Le Fevre Peninsula.
- . By 1874 this bridge was in such poor condition that not only was it inadequate for vehicular traffic you could not safely walk across it.
- . In 1875 a temporary wooden structure was erected 75feet south of the 1858 structure. This enabled work to start on the new iron bridge on almost the same alignment as its predecessor.
- . The Jervois Bridge was opened by Governor Jervois after whom it was named on 6 February, 1878.
- . The final design allowed for much heavier loading than the original proposed horse tramway as it was decided that a railway crossing via the bridge would allow the growing Semaphore area access to Adelaide.
- . It consisted of a 163ft long central swing span, a number of timber piled approach spans on the western side and a sheet piled approach embankment on the eastern side.
- . The swing span consisted on plate girders and cross girders fabricated in England and originally carried a timber deck with a central strip of steel buckled plates carrying a railway line to Glanville.
- . Contractors for the iron work were Westwood, Baillie & Co., London and the "swing gear" was designed and built by Sir William Armstrong at their works in England for the sum of \$12,000.

- . The iron bridge was built by day labourers under the supervision of Mr. Henry Parkes who was also involved in the erection of a bridge across the Murray at Murray Bridge under construction at the same time.
- . State of Art Design with best practice fabrication. The cost of the structure was \$130,000.
- . On 31 December 1877 a locomotive drawing 12 carriages steamed onto the bridge to test it. The men in charge of the design and building of the bridge were present as was Mr. David Bower, the Mayor of Port Adelaide. They were all satisfied with the performance of the bridge.

Notwithstanding there had to be proof loading before opening.

- . At the time of the opening, the "swing gear" had arrived but had not been installed and for a demonstration on 31 December 1877 a bridge had to be opened and closed manually with the use of a team of horses. The swing gear designed to be powered by steam was not operational for some 6 months after the opening but fortunately did not need to be used often as there was only one wharf on the southern side.
- . The swing gear was converted to electric power in 1918.
- . For some years the bridge carried water and gas mains which had to be disconnected whenever the swing span was opened. This led to the building of the Semaphore Water tower in 1880 which maintained the water pressure to the Peninsula when the bridge was open.
- . During its lifetime the bridge carried almost every type of public transport. It continued to take rail traffic until 1922. With the extension of the railway to Outer Harbour in 1908, rail traffic increased. Approximately 140 trains a week travelled through St. Vincent Street and most of these went across the Jervois Bridge. After several accidents and a desire by the residents to have the railway removed from the bridge the rail line was diverted.
- . The first electric tram passed over the Jervois Bridge to Semaphore in 1917 and this service, sharing the bridge with the railway for approximately four years, continued via this route until 1935. Trams had to be driven at full speed over the wing span as there was no power in this section of the overhead wire.
- . Motor buses replaced the electric tram service at first, with double decker trolley buses being introduced in April 1938 after some modification to the height of the anchor towers.

Bus drivers were instructed to proceed over the bridge at 6 miles per hour.

- . The bridge was not significantly changed in appearance during the time it stood, there was the addition of the anchor towers in 1917 which supported the overhead wires for trams and trolley buses, modifications to the towers in 1938 and the deck was later bituminised in 1947 when the carriageway was used by road traffic only.
- . The bridge suffered a fire on 23 February 1880 when the planking of the roadway caught fire. The fire was believed to be caused by the horse dung on the bridge being ignited in some way and measures were taken to ensure that it was swept twice a week thereafter.
- . In 1924 maintenance of the bridge passed from the Railways Dept. to the Roads and Bridges Department and the Harbours Board was given the duty of operating it.
- . In 1940 the Birkenhead Bridge was opened and the traffic flow previously handled by the Jervois Bridge alone was shared.
- . Jervois Bridge stood for 91 and a half years and was the Port's longest standing bridge. Originally designed for horse drawn trams, it saw major changes in transport technology including the use of steam trains, motor vehicles and electric buses and its own operation was converted from steam power to electric power.

In the 1950's and 60's the swing span jams during opening and closing in the summer months, caused increasingly severe traffic problems and with the discovery in the early 50's that some of the timber piles on the western approach were eaten away just below water line, it became evident that the bridge was coming to the end of its useful life. Trolley buses ceased using it and the last motor bus passed over it in December 1960 and a load limit was placed on it at that time. The Jervois Bridge was opened for river traffic for the last time on August 16, 1966.

- . On 28 July 1969 the present Jervois Bridge built alongside the original Jervois Bridge, was opened to traffic. //

7. ADDRESS BY DIVISION PRESIDENT MR. GLEN PARKINSON

"IEAust is proud to be associated with this occasion in recognising our heritage. This is the 5th engineering works in S.A. to be recognised with an Historic Engineering Marker plaque.

In October 1840, the Governor of the Colony Colonel Gawler opened the first wharf in this vicinity. the McLaren Wharf and an access road.

For many years the only means of communicating with the LeFevre Peninsula was by boat. The first bridge was built in 1855.

In 1860, Semaphore jetty was built. So Semaphore developed as a passenger gateway to Adelaide and was the point at which overseas mail arrived at and left South Australia – Outer Harbour was not developed until early this century.

The original single lane bridge, with footpath, was constructed of timber and sited near the location of the present Jervois Bridge and was known as "The Old Port Bridge".

In 1861, part of the eastern embankment was washed away and in 1864 the bridge was closed for a period whilst repairs were undertaken. By 1874 the bridge had deteriorated and a replacement was proposed.

In 1875 a temporary bridge was built 25 metres upstream of the Old Port Bridge. This original bridge was demolished, the channel widened and the new bridge built in 1878.

The construction of the bridge was supervised by the then Engineer in Chief of the Colony, Mr. H.C. Mais.

The bridge served the community for 91 years as a road bridge. It also provided rail access and water and gas services to the LeFevre Peninsula for many years.

Congratulation to all those involved in preserving and presenting this section of the only swing bridge constructed in South Australia.

I invite his Worship the Mayor of Port Adelaide to join me in unveiling the Historic Engineer Marker to recognised the Engineering Heritage of this structure."

8. ADDRESS BY MAYOR, MR. BOB ALLEN

"Deane Kemp, Chairman, Engineering Heritage Branch, Rod Payze, Commissioner of Highways, Department of Road Transport, Glen Parkinson, President of The Institution of Engineers, Members of the Institution of Engineers, Members of the State Heritage Authority, Aldermen Nicholls and John Isherwood, Director Technical Services Port Adelaide Council, Distinguished Guests, Ladies and Gentlemen

I am pleased to be associated with this ceremony to record the history of the old Jervois Bridge.

Not only was the swing bridge an interesting piece of engineering construction and attractive to look at, it had its own human interest stories.

One of the last bridge operators told me on an occasion which was bizarre and also demonstrated the special hold which the Port Adelaide Football Club has on its supporters. On a Saturday when Ports were playing at Alberton, the operator saw what he thought was a body floating towards the bridge. This happened close to the starting time for the match. He was torn between the need to report "the body" to the police and his anxiousness not to miss the game.

Like all true Port Adelaide supporters: Yes. He went to the footy. Next morning he scoured the Sunday Mail to see if there were any reports of missing persons. He was relieved when it appeared that nothing serious had occurred.

I commend the Institution of Engineers for their initiative in dedicating this structure with an historic engineering marker on the remnant of this once important bridge.

It is appropriate that future generations have visible records of our past. Through the preservation of this turntable tower and the Institute's plaque, people will have some idea of what, for nearly one hundred years, the bridge operation was like.

If I may I would like to mention that the Council has approved the production of a history of Port Adelaide. This will take the form of a series of publications on selected themes rather than one compendium.

In order to make these publications informative and attractive, it will be necessary to collect photographs, written material and where available movie film. Perhaps an appeal could be made through your organisations to obtain this, and other material, which can be put into these proposed histories and also be incorporated in computerised CD ROM facilities for everyone in the state to use.

Certainly a history of the Jervois Bridge would be an added bonus. This would need to be done while there is still access to much of the material in private hands before it is lost forever.

Mr. Kemp, I wish to record my thanks to you and your Institution for your interest and efforts in recognising the significance of the Jervois Bridge in the industrial and commercial life of Port Adelaide."



Institute of Engineers members Glen Parkinson and Dean Kemp with the Jervois bridge's new historical marker. 19372

Historical honor for a Port landmark

A PORT Adelaide landmark was vested with a rare honor this month and in doing so joined the ranks of famous icons including the stump jump plough.

The keeper's gallery of the now defunct Jervois swing bridge received an Australian Institute of Engineers historic marker, an honor the institute has bestowed on only five objects in SA.

Others have included Ardrossan's stump jump plough and the Gawler to Port Elliot rail line.

Institute of Engineers spokesman Dean Kemp said the marker was bestowed on the keepers gallery, a well-known landmark located near the Birkenhead bridge, because of its former importance to the Le Fevre Peninsula.

The Jervois swing bridge was built in 1878 and remained in service for 90 years.



The Plaque



Unveiling

Mayor Bob Allen and Division President, Glen Parkinson. Watched by Jim McCusker and Engineering Heritage Branch Chairman, Deane Kemp.



**Commissioner of Highway
Rod Payze**



Mayor of Port Adelaide, Mr. Bob Allen